

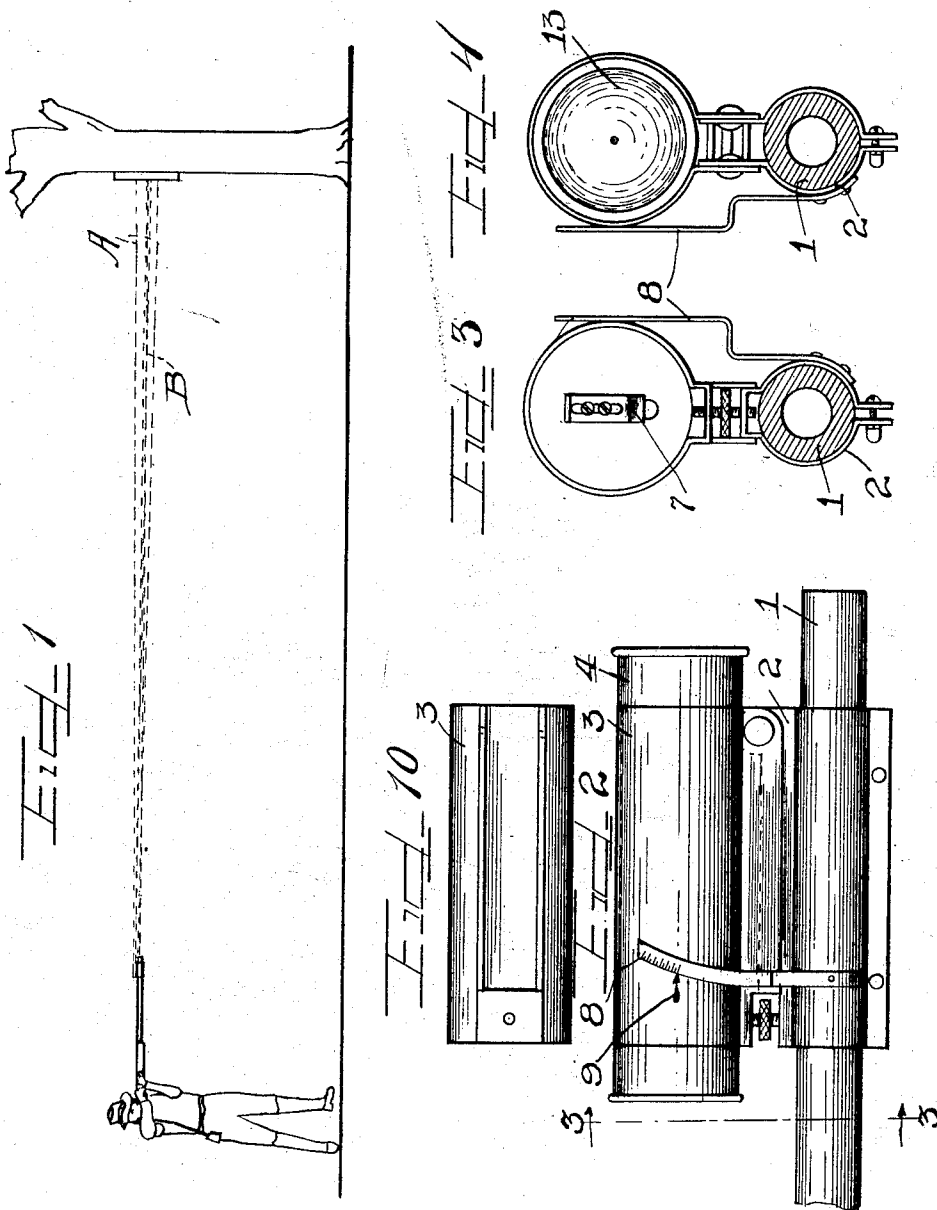
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G. ARCHER.
APPARATUS FOR AIMING GUNS AT NIGHT.
APPLICATION FILED SEPT. 14, 1911.

1,057,518.

Patented Apr. 1, 1913.

2 SHEETS-SHEET 1.



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Witnesses
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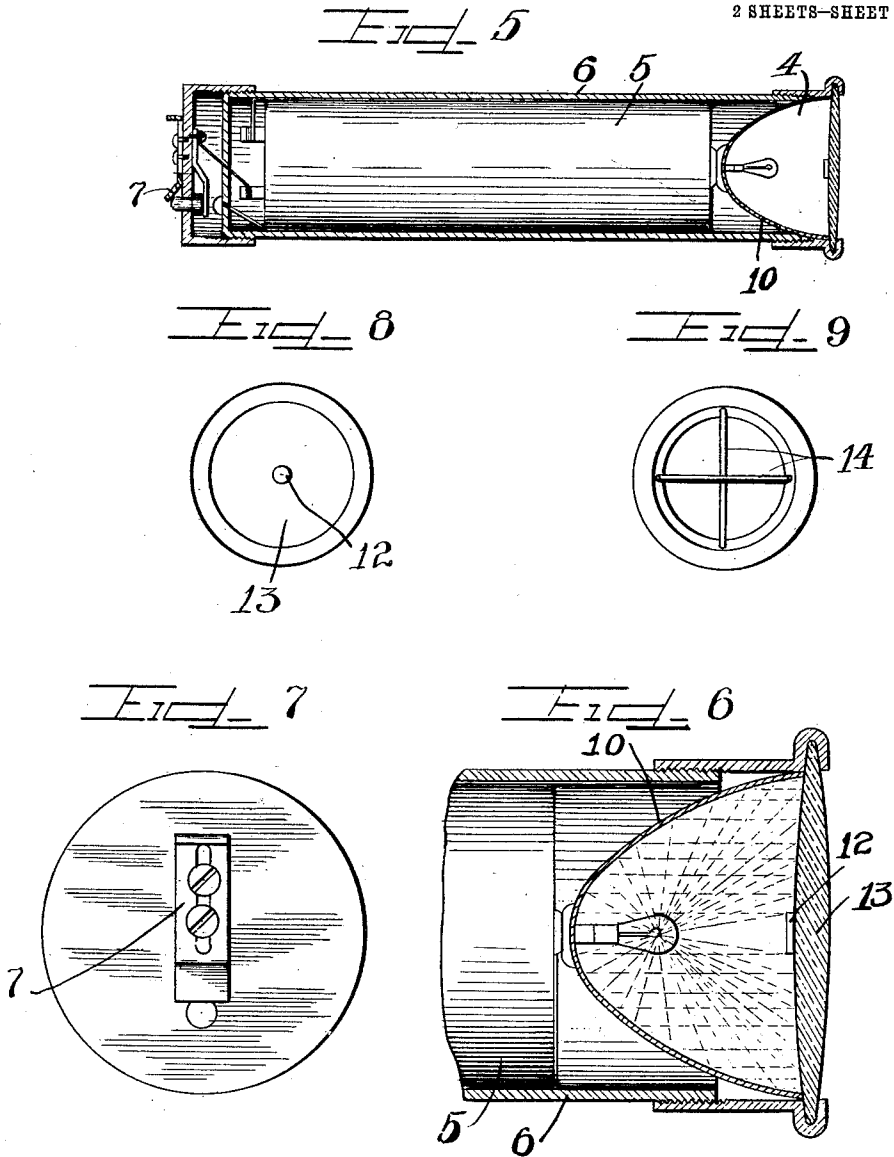
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UNITED STATES PATENT OFFICE.

GEORGE ARCHER, OF CHICAGO, ILLINOIS.

APPARATUS FOR AIMING GUNS AT NIGHT.

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Specification of Letters Patent.

Patented Apr. 1, 1913.

Application filed September 14, 1911. Serial No. 649,223.

To all whom it may concern:

Be it known that I, GEORGE ARCHER, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Apparatus for Aiming Guns at Night; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numbers of reference marked thereon, which form a part of this specification.

Difficulty has always been experienced heretofore, in accurately aiming any firearm or gun at any object when shot at at night. This is experienced in night hunting, where, in some instances, the hunter may wear upon his cap or hat a torch or light to attract the gaze of the animal hunted. The hunter, however, aims the gun, as usual, at the reflection of the light from the eyes of the animal and, inasmuch as the sights of the gun cannot be seen by the hunter, the aim is usually uncertain. Sometimes the sights of the gun are marked with phosphorescent paint to assist in aiming, but even with such assistance, night shooting has heretofore been uncertain and a large percentage of misses occur. Furthermore, occasions arise as in the case of attempted burglaries, where the householder, though armed, may be enabled to see the burglar, and if seen and a revolver aimed as usual, is discharged, the flash of the revolver with indicate with considerable accuracy the position of the householder to enable the burglar to return the fire.

Rapid fire and other guns, are of little value at night in times of warfare, unless the enemy be so near at hand as to obviate the difficulties occasioned by darkness in finding the enemy and properly aiming or training the gun or guns upon the enemy.

The object of this invention is to afford a method of accurately training a gun upon any object at which it is desired to shoot, without in any manner sighting the gun thereat, and to enable the gun to be held at any desired position with reference to the body of the user and to nevertheless insure the utmost accuracy and precision in shooting.

It is a further object of the invention to afford a method for training guns of any size or kind with accuracy, at the mark at

which it is desired to shoot at night or in darkness.

The invention is illustrated in connection with an ordinary rifle, although adapted for guns of any character or size.

The invention consists in the matters hereinafter described and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is a somewhat diagrammatic view, illustrating my invention. Fig. 2 is a side elevation of one form of device embodying my invention, showing the same applied to an ordinary rifle barrel. Fig. 3 is a section on line 3—3 of Fig. 2. Fig. 4 is a front end elevation thereof, showing the rifle barrel in section. Fig. 5 is an enlarged longitudinal section of the light affording mechanism used in the embodiment of my invention illustrated herein. Fig. 6 is an enlarged longitudinal section of the lantern or flashlight. Fig. 7 is a rear end elevation showing one form of switch. Figs. 8 and 9 are views in front elevation of the lantern illustrating two ways of indicating the center of the target. Fig. 10 is a bottom plan view of the lantern carrying sleeve and showing the same removed from the gun.

As shown in the drawings: 1, indicates the gun. 2, indicates a clamping sleeve of any suitable kind, which may be rigidly or removably secured on the barrel of the gun or otherwise in proper operative relation thereto. Pivotaly engaged on the sleeve 2, is a sleeve 3, in which is secured the lantern or flashlight 4, shown as a familiar form of electric flashlight operated by the energy of a dry cell 5, secured in the casing or shell 6, at the rear of the lantern. Suitable binding posts are provided on the battery, as usual, and these are connected in any suitable manner by means of a slide (or any suitable) switch 7, whereby the circuit may be opened or closed at will.

Secured upon the sleeve 2, projecting upwardly alongside the lantern carrying sleeve 3, is an arm 8, marked with a scale on one face thereof to indicate the elevation or adjustment of the lantern carrying sleeve for determining the range in yards of the target, and, as shown, an arrow 9, or other suitable indicator, is provided on the side of the lantern carrying sleeve.

The lantern will vary from the cheap or inexpensive commercial flashlight, where the range is comparatively short, as for re-

volver practice, to the more expensive lantern comprising a parabolic reflector 10, whereby the light may be concentrated in a beam upon a target at a considerable distance.

5 The lantern may also be provided with means, as, for instance, a small circular opaque spot 12, at the center of the lens 13, or, if desired, crossed hairs 14, may be used to indicate accurately the center of the illumination and target. The lantern is so mounted upon, or with reference to the gun, that the gun is mechanically aimed for the ball to strike at the center of the illumination afforded by the lantern when properly adjusted to the range, that is to say, when the lantern is properly adjusted by means of the indicator 9, and arm 8, to read for the desired distance of range, the bullet from the gun will strike at the center of the illuminated area at the target, or if this be marked by a dark spot occasioned by the crossed hairs or by the opaque spot occasioned by the lens, the said bullet will strike the central shadow occasioned thereby.

25 For larger guns, a search-light of any suitable kind may be so connected with the gun carriage (either electrical or otherwise) that the gun is swung or trained to correspond with the adjustments of the lamp to maintain at all times the center of the illumination as a target, thus enabling the gun to be trained with the utmost accuracy at night. If desired, for revolver or rifle use, the revolver or rifle may be held in any desired position, the user being assured that any body or object at the center of illumination occasioned by the lamp will be struck by the bullet which converges to that point at the range for which the device is adjusted. Ordinarily for revolver use, inasmuch as the range is comparatively short, no adjustment need be provided, as sufficient accuracy is assured for short range without adjustment.

45 As shown in Fig. 1, while a considerable portion of the target is illuminated by the lantern, the bullet will converge to the center of the illumination, as shown in dotted lines A and B.

50 Of course, it is to be understood that I have shown but one (and that among the simplest) forms of mechanism or apparatus for embodying my invention. I purpose to claim broadly the method and apparatus of accurately training guns by illuminating the

target as hereinbefore described, and I do not purpose limiting the patent to be granted on this application otherwise than necessitated by the prior art.

I claim as my invention:

1. A device of the class described embracing a light, a case therefor, a sleeve secured therearound to support the same, a second sleeve pivotally connected to the first sleeve, means for positioning one relative to the other and a curved arm range gradient secured on the said second sleeve and adapted to indicate the relative movement of the first.

2. A device of the class described embracing an incased light, a sleeve on said light, a second sleeve adapted to engage a gun barrel or the like, interfitting tongues on said sleeves, a pivot therethrough, means for changing the relative position of the said sleeves, a graduated arm secured on one sleeve, and an indicator on the other sleeve adapted to denote the range of coincidence of the light beam with the trajectory of a projectile from the gun.

3. A device of the class described comprising two pivotally connected resilient sleeves, one engaging a source of light, the other adjustable and adapted to be clamped on a gun, an arm secured on the gun sleeve, and curved concentric with the relative path of movement of the two sleeves, range gradations on said arm, and an indicator on said first sleeve adapted to contact the edge of said arm to denote the range of coincidence of the light beam and the trajectory of a projectile from the gun.

4. A device of the class described embracing a gun, a source of light, a parabolic reflector for concentrating the light upon the target, means adjusting said gun and said source of light relatively to each other for the different ranges whereby the projectile is at all times directed at the center of illumination at the target, and a curved graduated arm secured to the gun and projecting into juxtaposition with a mark on said light source.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

GEORGE ARCHER.

Witnesses:

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